

AMENDMENTS TO THE SPECIFICATION:

Please amend the title beginning at page 1, line 3, as follows:

FIELD OF THE INVENTION

Please amend the paragraph beginning at page 1, line 4, as follows:

The ~~present invention~~ exemplary illustrative embodiment presented herein relates to an image processing device such as a digital multifunctional device composed of a scanner and a printer, and preferably relates to an image processing device connected to a communication path (such as a network) and having, in addition to the functions mentioned above, an image communicating function and a printer function. More specifically, the ~~present invention~~ exemplary illustrative embodiment relates to an image processing device that temporarily stores the image data in a memory equipped to the digital multifunctional device so as to process the input image data, and invalidates the stored image data having completed processing from the memory.

Please amend the title beginning at page 4, line 14, as follows:

SUMMARY OF THE INVENTION

Please amend the paragraph beginning at page 4, line 15, as follows:

Therefore, the ~~present invention~~ exemplary illustrative embodiment presented herein aims at solving the above-mentioned problems of the prior art. ~~The object~~ A feature of the ~~invention~~ exemplary illustrative embodiment is achieved by providing an image processing device according to which the invalidation process for the image data stored in the image data

storage unit (memory) is repeated for a number of times to the region storing the image data according to its security level so as to achieve sufficient protection of confidentiality of the image data, while on the other hand taking measures not to deteriorate the efficiency for accepting new image data in the image processing device while invalidating the unnecessary image data.

Please amend the paragraph beginning at page 4, line 26, as follows:

The image processing device according to the ~~present invention~~ exemplary illustrative embodiment comprises: an image data input unit for inputting image data; an image data storage unit for storing the image data input through the image data input unit; an image data processing unit for processing the image data stored in the image data storage unit; and an image data invalidation unit for invalidating the image data stored in the image data storage unit; wherein when there is input of a new image data through the image data input unit while the image data invalidation unit is performing invalidation of a preceding image data stored in the image data storage unit, the image data invalidation unit comprises a function to interrupt the invalidation of the preceding image data stored in the image data storage unit so as to invalidate the preceding image data with the new image data being input to the device.

Please amend the paragraph beginning at page 5, line 24, as follows:

According to this feature of the ~~invention~~ exemplary illustrative embodiment, the present device can accept new image data to be input to the device for processing and can process the new image data without delay, while improving the security level of the image data processed by the device.

Please amend the paragraph beginning at page 6, line 3, as follows:

Further, the image processing device according to ~~the present invention~~ an exemplary illustrative embodiment comprises: an image data input unit for inputting image data; an image data storage unit for storing the image data input through the image data input unit; an image data processing unit for processing the image data stored in the image data storage unit; and an image data invalidation unit for invalidating the image data stored in the image data storage unit; wherein when there is input of a new image data through the image data input unit after the image data invalidation unit has completed the invalidation of a preceding image data being stored in the image data storage unit, the image data invalidation unit comprises a function to invalidate the preceding image data with the new image data being input to the device.

Please amend the paragraph beginning at page 6, line 26, as follows:

Moreover, the image processing device of the ~~present invention~~ exemplary illustrative embodiment characterizes in that the image data invalidation unit comprises a function to invalidate the new image data together with the preceding image data when performing invalidation of the new image data being input through the image data input unit.

Please amend the paragraph beginning at page 7, line 15, as follows:

Moreover, the image processing device of ~~the present invention~~ an exemplary illustrative embodiment comprises: an image data input unit for inputting image data; an image data storage unit for storing the image data input through the image data input unit; an image data processing unit for processing the image data stored in the image data storage unit; and an image data invalidation unit for invalidating the image data stored in the image data storage unit; wherein when there is input of a new image data through the image data input unit while the image data invalidation unit is performing invalidation of a preceding image data being stored in the image data storage unit, the image data invalidation unit comprises a function to interrupt the invalidation of the preceding image data stored in the image data storage unit so as to store in the image data storage unit the new image data being input to the device.

Please amend the paragraph beginning at page 8, line 4, as follows:

Another example of the image processing device of the ~~present invention~~ exemplary illustrative embodiment comprises: an image data input unit for inputting image data; an image data storage unit for storing the image data input through the image data input unit; an image data processing unit for processing the image data stored in the image data storage unit; and an image data invalidation unit for invalidating the image data stored in the image data storage unit; wherein the image data invalidation unit comprises a function to interrupt the invalidation of a preceding image data stored in the image data storage unit when input of a new image data through the image data input unit is confirmed while the image data invalidation unit is performing invalidation of the preceding image data being stored in the image data storage unit,

so as to store the new image data in a region of the image data storage unit that is different from the region in which the preceding image data is stored.

Please amend the paragraph beginning at page 8, line 20, as follows:

According to the above-mentioned ~~invention~~ exemplary illustrative embodiment, when input of a new image data through the image data input unit is confirmed while the image data invalidation unit is performing invalidation of the preceding image data being stored in the image data storage unit, the invalidation performed to the preceding image data stored in the image data storage unit by the image data invalidation unit is interrupted, so as to store the new image data in a memory region that is different from the region in which the preceding image data is stored.

Please amend the paragraph beginning at page 9, line 7, as follows:

In another example of ~~the present invention~~ an exemplary illustrative embodiment, the image data invalidation unit comprises a function to invalidate the new image data together with the preceding image data when performing invalidation of the new image data being input through the image data input unit.

Please amend the paragraph beginning at page 10, line 5, as follows:

In another example of the ~~present invention~~ exemplary illustrative embodiment, the image processing device comprises an image data input unit for inputting image data; an image data storage unit for storing the image data input through the image data input unit; an image data processing unit for processing the image data stored in the image data storage unit; an image data invalidation unit for invalidating the image data stored in the image data storage unit; and a determination unit for determining whether to prioritize the invalidation by the image data invalidation unit of a preceding image data stored in the image data storage unit or the storage of a new image data being input through the image data input unit to the image data storage unit, based on the contents of the image data.

Please amend the paragraph beginning at page 10, line 18, as follows:

According to the above-mentioned ~~invention~~ exemplary illustrative embodiment, when input of a new image data is confirmed while the preceding image data stored in the image data storage unit is being invalidated by the image data invalidation unit, the determination means determines whether to prioritize the invalidation of the preceding image data in the image data storage unit or the storage of a new image data being input to the device, and based on the contents of the preceding image data being subjected to invalidation, interrupts the invalidation process to accept storage of the new image data to the image data storage unit.

Please amend the paragraph beginning at page 11, line 6, as follows:

Moreover, the present image processing device ~~characterizes~~ is characterized in that the determination unit is equipped with a function to determine, according to a security level set for

the preceding image data being invalidated by the image data invalidation unit, whether to continue invalidation of the preceding image data by the image data invalidation unit or to interrupt the invalidation of the preceding image data by the image data invalidation unit so as to store the new image data being input through the image data input unit to the image data storage unit.

Please amend the paragraph beginning at page 11, line 15, as follows:

According to the ~~invention mentioned above~~ exemplary illustrative embodiment presented herein, the determination unit determines whether to continue invalidation of the preceding image data or to interrupt the invalidation process to store the new image data according to the security level of the preceding image data being invalidated, judging whether the invalidation process or the new image data storage process has higher priority.

Please amend the paragraph beginning at page 11, line 22, as follows:

According to this feature of the ~~present invention~~ exemplary illustrative embodiment, the device is capable of prioritizing the invalidation of the preceding image data over the storage of the new image data to the image data storage unit based on the security level of the image data, thus improving the security level of the image data stored in the device. On the other hand, the device is capable of prioritizing the storage of the new image data to the image data storage unit over the invalidation of the preceding image data based on the security level set for the image data, thus improving efficiency for processing the image data received by the device as a new job.

Please amend the paragraph beginning at page 12, line 7, as follows:

The image processing device according to the ~~present invention~~ exemplary illustrative embodiment further comprises a first security level setup unit for setting up a security level for the image data being input to the device.

Please amend the paragraph beginning at page 12, line 11, as follows:

According to this feature of the ~~present invention~~ exemplary illustrative embodiment, the security level is set using the first security level setup unit for each image data input to the device.

Please amend the paragraph beginning at page 12, line 21, as follows:

The image processing device of the ~~present invention~~ exemplary illustrative embodiment is further equipped with a second security level setup unit for setting up a security level for each route of input of the image data to the device.

Please amend the paragraph beginning at page 12, line 25, as follows:

According to this feature of the ~~invention~~ exemplary illustrative embodiment, the security level can be set for each input route of the image data through the second security level setup unit.

Please amend the paragraph beginning at page 13, line 12, as follows:

FIG. 1 is an explanatory view showing the schematic configuration of a digital multifunctional device or image processing device according to embodiment 1 of the present invention;

Please amend the paragraph beginning at page 13, line 16, as follows:

FIG. 2 is an explanatory view showing the construction of an operation unit according to the image processing device of the invention an exemplary illustrative embodiment;

Please amend the paragraph beginning at page 14, line 20, as follows:

FIG. 14 is a time chart comparing the operations for processing the job in the image processing device or digital multifunctional device according to the prior art and according to the present invention an exemplary illustrative embodiment;

Please amend the paragraph beginning at page 15, line 6, as follows:

FIG. 17 is an explanatory view showing the schematic configuration of a digital multifunctional device or image processing device according to embodiment 2 of the present invention;

Please amend the paragraph beginning at page 15, line 10, as follows:

FIG. 18 is a time chart comparing the operations for processing the job in the image processing device or digital multifunctional device according to the prior art and according to the present invention an exemplary illustrative embodiment;

Please amend the paragraph beginning at page 15, line 18, as follows:

FIG. 20 is an explanatory view showing the schematic configuration of a digital multifunctional device or image processing device according to embodiment 3 of the present invention;

Please amend the paragraph beginning at page 15, line 22, as follows:

FIG. 21 is an explanatory view showing the setup screen (print driver screen) displayed on the screen of an external device connected to the image processing device according to the present invention, an exemplary illustrative embodiment; and

Please amend the paragraph beginning at page 16, line 4, as follows:

Embodiment 1 of the image processing device ~~according to the present invention~~ will now be explained with reference to the drawings.

Please amend the paragraph beginning at page 16, line 7, as follows:

FIG. 1 is an explanatory view showing the schematic configuration of the digital multifunctional device which is the image processing device according to the first embodiment of the present invention.

Please amend the paragraph beginning at page 17, line 1, as follows:

Embodiment 1 of the ~~present invention~~ will now be explained with reference to FIGS. 1 through 16.

Please amend the paragraph beginning at page 21, line 4, as follows:

Each component constituting the digital multifunctional device 1 according to embodiment 1 of the ~~present invention~~ is controlled through the device control unit 8, which monitors the instructions for operation entered by the user through the input unit 4a, such as tablets and key groups, equipped to the operation unit 4, and displays the guidance information to be notified to the user, such as information related to the status of the digital multifunctional device 1, through the display unit 4b.

Please amend the paragraph beginning at page 21, line 18, as follows:

As shown in FIG. 1, the digital multifunctional device 1 of the ~~present invention~~ exemplary illustrative embodiment comprises an image reading unit 2 for inputting image data, a hard disk 12 for storing the image data being entered through the image reading unit 2, an image forming unit 6 for processing the image data being stored in the hard disk 12, and a device control unit 8 for invalidating the image data in the hard disk 12. The device control unit 8 is equipped with a function to invalidate a preceding image data with a new image data being input when new image data is entered through the image reading unit 2 at a timing in which the invalidation of the preceding image data stored in the hard disk 12 has been completed by the device control unit 8.

Please amend the paragraph beginning at page 22, line 4, as follows:

According to the digital multifunctional device 1 of the ~~present invention~~ exemplary illustrative embodiment, the device control unit 8 has a function to invalidate a new image data together with a preceding image data when invalidating the new image data being newly entered through the image reading unit 2.

Please amend the paragraph beginning at page 22, line 9, as follows:

The digital multifunctional device 1 according to the ~~present invention~~ exemplary illustrative embodiment comprises, as shown in FIG. 1, an image reading unit 2 for entering the image data, a hard disk 12 for storing the image data being entered through the image reading unit 2, an image forming unit 6 for processing the image data stored in the hard disk 12, and a device control unit 8 for invalidating the image data stored in the hard disk 12. The device control unit 8 is equipped with a function to interrupt (suspend) the invalidation of a preceding image data stored in the hard disk 12 by the equipment control unit 8 and to store a newly entered image data in the hard disk 12, when a new image data is input through the image reading unit 2 while the equipment control unit 8 is invalidating the preceding image data stored in the hard disk.

Please amend the paragraph beginning at page 37, line 8, as follows:

Moreover, according to the ~~present invention~~ exemplary illustrative embodiment presented herein, as shown in the fourth time chart (b), the entry of a new job 2 (Job2) is confirmed when the process of the preceding job 1 (Job1) is completed, and when there is entry of a new job 2 (a reservation of a new job such as operation of the device or input of data), the

new job is accepted and processed without starting the invalidation process of the data related to the preceding job 1.

Please amend the paragraph beginning at page 38, line 1, as follows:

According to the ~~present invention~~ exemplary illustrative embodiment explained above, the following effects are achieved.

Please amend the paragraph beginning at page 38, line 3, as follows:

According to the image processing device of the ~~present invention~~ exemplary illustrative embodiment, when new image data is entered through the image data input means while a previous image data stored in the image data storage means is being invalidated by the image data invalidation means, the invalidation process being performed to the previous image data is interrupted to store the new image data to the region storing the previous image data. Further, when invalidating the image data stored in the image data storage means, the invalidation process can be performed repeatedly to the region storing the image data for a number of times determined according to the security level of the image data, so that the confidentiality of the stored image data is maintained. Thus, the present device is capable of accepting entry of new image data and processing the new image data efficiently without delay, while improving the security level of the device for the image data being accepted.

Please amend the paragraph beginning at page 38, line 19, as follows:

According further to the image processing device of the ~~present invention~~ exemplary illustrative embodiment, when new image data is entered through the image data input means

just after termination of invalidation process of a previous image data stored in the image data storage means, the new image data can be stored in the region in which previous image data has been stored. Further, when invalidating the image data stored in the image data storage means, the invalidation process can be performed repeatedly to the region storing the image data for a number of times determined according to the security level of the image data, so that the confidentiality of the stored image data is maintained. Thus, the present device is capable of accepting entry of new image data and processing the new image data efficiently without delay, while improving the security level of the device for the image data being accepted.

Please amend the paragraph beginning at page 39, line 8, as follows:

According to the image processing device of the ~~present invention~~ exemplary illustrative embodiment, upon invalidating the newly entered image data by the image data invalidation means, the new image data can be invalidated together with the previous image data, so that the operation for invalidating the image data can be performed efficiently, and the degradation of the image data processing ability of the device can be minimized.

Please amend the paragraph beginning at page 39, line 20, as follows:

FIG. 17 is an explanatory view showing the basic configuration of a digital multifunctional device which is the image processing device according to embodiment 2 of the present invention.

Please amend the paragraph beginning at page 39, line 24, as follows:

The image processing device according to embodiment 2 of the present invention is similar to the image processing device according to embodiment 1 mentioned above, and FIGS. 2 through 13 apply to the device of embodiment 2, so detailed explanations thereof are omitted.

Please amend the paragraph beginning at page 40, line 3, as follows:

As shown in FIG. 17, the digital multifunctional device 1 which is the image processing device of the present invention exemplary illustrative embodiment presented herein comprises an image reading unit 2 functioning as an image data input means for entering the image data, a hard disk 12 functioning as an image data storage means for storing the image data being entered through the image reading unit 2, an image forming unit 6 functioning as an image data processing means for processing the image data stored in the hard disk 12, and a device control unit 8 functioning as an image data invalidation means for invalidating the image data in the hard disk 12. When a new image data is input through the image reading unit 2 while the device control unit 8 is invalidating the preceding image data stored in the hard disk 12, the invalidation of the preceding image data in the hard disk performed by the device control unit 8 is interrupted, and the new image data being entered is stored in a region of the hard disk 12 different from the region in which the preceding image data is stored.

Please amend the paragraph beginning at page 41, line 6, as follows:

The digital multifunctional device 1 according to embodiment 2 ~~of the present invention~~ comprises an image reading unit 2, an operation unit 4, an image forming unit 6, a device control unit 8, a communication unit 10, a hard disk (HD) 12 and a managing unit 14.

Please amend the paragraph beginning at page 42, line 15, as follows:

Therefore, according to the ~~present invention~~ exemplary illustrative embodiment presented herein, as shown in the third time chart (a) of FIG. 18, if the new job 2 (Job2) is entered after the process of the preceding job 1 (Job1) has been completed and while the invalidation process of the data related to the preceding job 1 is being repeatedly performed for a predetermined number of times (N times) (or at an earlier timing: after receiving and before completing Job1), the new job 2 (Job2) is accepted and executed when one sequence of erasing operations (erasing operation corresponding to a single erasing operation which will be repeated for N times) is terminated.

Please amend the paragraph beginning at page 44, line 13, as follows:

Moreover, according to the ~~present invention~~ exemplary illustrative embodiment, as shown in the fourth time chart (b), when the processing of the preceding job 1 (Job1) has been completed and while the invalidation process for the data of preceding job 1 is repeatedly performed for a number of times (N times) (or prior thereto, after the Job 1 is accepted), if there is entry of a new job 2 (a reservation for a new job such as operation of the device or input of data), the new job 2 (Job2) is accepted and processed when one sequence of erasing operation (erasing of data corresponding to a single erasing operation to be repeated) has been completed.

Please amend the paragraph beginning at page 45, line 12, as follows:

According to the ~~present invention~~ exemplary illustrative embodiment explained above, the following effects are achieved.

Please amend the paragraph beginning at page 45, line 14, as follows:

According to the image processing device of the ~~present invention~~ exemplary illustrative embodiment, when new image data is entered through the image data input means while a previous image data stored in the image data storage means is being invalidated by the image data invalidation unit, the invalidation process being performed to the previous image data is suspended so as to store the new image data to the region different from the region in which the previous image data is stored. Further, when invalidating the image data stored in the image data storage means, the invalidation process can be performed repeatedly to the region storing the image data for a number of times determined according to the security level of the image data, so that the confidentiality of the stored image data can be protected. Thus, the present device is

capable of accepting entry of new image data and processing the new image data efficiently without delay, while improving the security level of the device for the image data being accepted.

Please amend the paragraph beginning at page 46, line 14, as follows:

Now, the third embodiment of the image processing device ~~according to the present invention~~ will be explained with reference to the drawings.

Please amend the paragraph beginning at page 46, line 17, as follows:

FIG. 20 is an explanatory view showing the schematic configuration of the digital multifunctional device or image processing device according to embodiment 3 ~~of the present invention~~.

Please amend the paragraph beginning at page 46, line 21, as follows:

The image processing device according to embodiment 3 ~~of the present invention~~ has a similar construction as that of embodiment 1, and FIGS. 2 to 13 apply to embodiment 3. Further, the image processing device of embodiment 3 has a similar construction as that of embodiment 2, and FIGS. 18 and 19 apply to embodiment 3. Thus, detailed explanations thereof are omitted.

Please amend the paragraph beginning at page 47, line 2, as follows:

The digital multifunctional device 1 being the image processing device according to the ~~present invention~~ exemplary illustrative embodiment presented herein comprises, as shown in FIG. 20, an image reading unit 2 functioning as an image data input unit for inputting image data, a hard disk 12 functioning as an image data storage means for storing the image data being input through the image reading unit 2, an image forming unit 6 functioning as an image data processing means for processing the image data stored in the hard disk 12, and an image data invalidation means for invalidating the image data stored in the hard disk 12. Further, the present device 1 comprises a determination means for determining, based on the contents of the image data, whether to prioritize the processing of the invalidation of a preceding image data stored in the hard disk 12 or the storing of the new image data being entered through the image reading unit 2 to the hard disk 12 by the image data invalidation means.

Please amend the paragraph beginning at page 47, line 18, as follows:

The determination means of the digital multifunctional device 1 of the ~~present invention~~ exemplary illustrative embodiment has a function to determine, based on the security level of the preceding image data being invalidated by the image data invalidation means, whether to continue the invalidation operation of the preceding image data, or to suspends the invalidation operation of the preceding image data to store the new image data being input through the image reading unit 2 to the hard disk 12.

Please amend the paragraph beginning at page 47, line 26, as follows:

The digital multifunctional device 1 of the ~~present invention~~ exemplary illustrative embodiment is equipped with a first security level setting means for setting the security level of the image data being input.

Please amend the paragraph beginning at page 48, line 3, as follows:

The digital multifunctional device 1 of the ~~present invention~~ exemplary illustrative embodiment is further equipped with a second security level setting means for setting the security level for each route of input of the image data.

Please amend the paragraph beginning at page 48, line 7, as follows:

As shown in FIG. 20, the digital multifunctional device 1 of the ~~present invention~~ exemplary illustrative embodiment comprises an image reading unit 2, an operation unit 4, an image forming unit 6, a device control unit 8, a communication unit 10, a hard disk (HD) 12, and a managing unit 14.

Please amend the paragraph beginning at page 53, line 11, as follows:

According to the image processing device of the ~~present invention~~ exemplary illustrative embodiment presented herein, if input of new image data through the image data input means is confirmed while a preceding image data stored in the image data storage means is being invalidated by the image data invalidation means, the determination means determines whether to prioritize the invalidation by the image data invalidation means of the preceding image data stored in the image data storage means or the storage of new image data to the image data

storage means being input through the image data input means, according to the contents of the image data. Therefore, according to the contents of the preceding image data being invalidated, the device may interrupt the invalidation process to accept storage of the new image data to the image data storage means. When invalidating the image data stored in the image data storage means, the invalidation process can be repeatedly performed to the region in which the image data is stored according to the contents of the image data, so as to achieve a sufficient protection of the confidentiality of the stored image data. The present device can accept the input of a new image data to be processed by the device and process the received image data efficiently without delay, and still improve the security level of the image data received as a job and stored in the device.

Please amend the paragraph beginning at page 54, line 8, as follows:

According to the image processing device of the present invention exemplary illustrative embodiment presented herein, the determination means can determine according to the security level of the preceding image data being invalidated by the image data invalidation means whether to continue the invalidation of the preceding data or to interrupt the invalidation process of the preceding image data to store the new image data being input through the image data input means to the image data storage means. Thus, the determination means of the present invention exemplary illustrative embodiment can determine based on the security level of the preceding image data the priority of the invalidation of the preceding image data and the storing of new image data. If the invalidation of the preceding image data has higher priority than the storing of new image data to the image data storage means, the invalidation process of the preceding image data will not be interrupted, so the security level of the image data received by the device is

improved. If the storage of the new image data to the image data storage means has higher priority over the invalidation of the preceding image data according to the security level of the image data, the image data received by the device as a new job can be processed efficiently without delay.

Please amend the paragraph beginning at page 55, line 3, as follows:

According to the image processing device of the ~~present invention~~ exemplary illustrative embodiment presented herein, the user can set up the security level of the image data being entered, simply by inputting the security level through the first security level setting means, so the user can utilize this function effectively.

Please amend the paragraph beginning at page 55, line 12, as follows:

According further to the image processing device of the ~~present invention~~ exemplary illustrative embodiment, the user can set up the security level for each image data processing mode according to the security environment at the installation site by simply determining the security levels for each route of entry of the image data through the second security level setting means, so the user can utilize this function effectively.